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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/828,502	04/21/2004	Winfried-Hagen Friedl	2560-0434	4288

7590

11/16/2005

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EXAMINER

WHITE, DWAYNE J

ART UNIT	PAPER NUMBER
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3745

DATE MAILED: 11/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

6

Office Action Summary	Application No. 10/828,502	Applicant(s) FRIEDL ET AL.	
	Examiner Dwayne J. White	Art Unit 3745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-11 and 13 is/are rejected.
- 7) ☒ Claim(s) 7 and 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1. ☒ Certified copies of the priority documents have been received.
 - 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/4/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 8, 9 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Tomita et al. (5,967,745). Tomita et al. disclose a turbine for a gas turbine engine comprising: A turbine disk carrying rotor blades 1 and rotor blade platforms 2; a stator ring carrying stator blades 11 and platforms 12, a single lateral wheel cavity formed between the turbine disk and stator ring; and a seal provided in an axial direction between the stator platforms and rotor platforms which is arranged radially outwardly from a center axis of turbine and adjacent the main gas duct.

Claims 1-4, 8, 9 and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Yuri et al. (6,837,676). Yuri et al. disclose a turbine for a gas turbine engine comprising: A turbine disk carrying rotor blades 33 and rotor blade platforms 33A; a stator ring carrying stator blades 31 and platforms, a single lateral wheel cavity formed between the turbine disk and stator ring; and a seal 56 provided in an axial direction between the stator platforms and rotor platforms which is arranged radially outwardly from a center axis of turbine and adjacent the main gas

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duct. The rotor blade platform forms the seal runner 56 with labyrinth seal tips 56a position on the blade platforms.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tomita et al. in view of Farrell et al. (6,779,972). Tomita et al. discloses all of the claimed subject matter except the labyrinth seal tips being positioned on the stator ring and forming the seal runner with the rotor platforms.

Farrell et al. teaches a sealing configuration for a turbine wherein the stator platform has the seal tips 46 formed on it and the seal runner is formed with the rotor platform. Since both Tomita et al. and Farrell et al. disclose sealing arrangements for gas turbines, it would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the sealing arrangement of Tomita et al., with the teaches of Farrell et al., by switching the placement of the seal tips and seal runner surface for the purpose of sealing the leakage gap.

Claims 6 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tomita et al. in view of Wolfe et al. (6,431,827). Tomita et al discloses all of the claimed subject matter except the seal being a brush seal.

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Wolfe et al. teaches a sealing arrangement for a gas turbine wherein a brush seal is used in association with the rotor platform. Since both Tomita et al. and Wolfe et al. disclose seal arrangements and it is well known the sealing devices can be used interchangeable, it would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the seal of Tomita et al., with the teaches of Wolfe et al., by using a brush seal instead of a labyrinth seal for the purpose of sealing the leakage gap.

CONCLUSION

Allowable Subject Matter

Claims 7 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dwayne J. White whose telephone number is (571) 272-4825. The examiner can normally be reached on 7:00 am to 4 pm T-F and alternate Mondays.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look can be reached on (571) 272-4820. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Dwayne J White
Patent Examiner
Art Unit 3745

DJW


EDWARD K. LOOK
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700
11/13/05